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Term:

((sic or silicon carbide) near (capillary or bond
 tool)) and boron

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USPT,JPAB,EPAB,DWPI,TDBD	((sic or silicon carbide) near (capillary or bond tool)) and boron	4	<u>L6</u>
USPT,JPAB,EPAB,DWPI,TDBD	(sic or silicon carbide) near (capillary or bond tool)	20	<u>L5</u>
USPT,JPAB,EPAB,DWPI,TDBD	semiconductor adj capillary	9	<u>L4</u>
USPT,JPAB,EPAB,DWPI,TDBD	12 and wire bond	14	<u>L3</u>
USPT,JPAB,EPAB,DWPI,TDBD	(capillary or tip) near semiconductor	347	<u>L2</u>
DWPI,USPT,EPAB,JPAB,TDBD	(capillary or tip) and semiconductor	24701	<u>L1</u>

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USPT,JPAB,EPAB,DWPI,TDBD	wire bond and ((capillary or tip or tool) near (ceramic or alumina or zirconia or Al2O3 or ZrO2))	24	<u>L7</u>
USPT,JPAB,EPAB,DWPI,TDBD	wire bond and (capillary or tip or tool) and (ceramic or alumina or zirconia or Al2O3 or ZrO2)	724	<u>L6</u>
USPT,JPAB,EPAB,DWPI,TDBD	12 and tungsten carbide and titanium and nitride and carbide	0	<u>L5</u>
USPT,JPAB,EPAB,DWPI,TDBD	12 and diamond and boron	0	<u>L4</u>
USPT,JPAB,EPAB,DWPI,TDBD	11 and ((dissipative or semiconductor) adj (capillary or tip or tool))	12	<u>L3</u>
USPT,JPAB,EPAB,DWPI,TDBD	11 and ((capillary or tip or tool) near (dissipative or semiconductor))	39	<u>L2</u>
USPT,JPAB,EPAB,DWPI,TDBD	wire bond and (capillary or tip or tool) and (dissipative or semiconductor)	1771	<u>L1</u>

09/5/4454
Part of Paper No. 7

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Term:

wire bond and ((capillary or tip or tool) near
(ceramic or alumina or zirconia or Al2O3 or ZrO2))

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L7: Entry 24 of 24

File: DWPI

Jul 7, 1988

DERWENT-ACC-NO: 1988-230938
DERWENT-WEEK: 198833
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TITLE: Ceramic capillary structure for wire bonding - where top portion
comprises silicon, aluminium, and yttrium NoAbstract Dwg 0/3

PATENT-ASSIGNEE:

ASSIGNEE	CODE
KYOCERA CORP	KYOC

PRIORITY-DATA:

1986JP-0312550	December 25, 1986
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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 63164228 A	July 7, 1988	N/A	004	N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-NO
JP63164228A	December 25, 1986	1986JP-0312550	N/A

INT-CL (IPC): H01L 21/60

ABSTRACTED-PUB-NO:

EQUIVALENT-ABSTRACTS:

TITLE-TERMS: CERAMIC CAPILLARY STRUCTURE WIRE BOND TOP PORTION COMPRISE SILICON
ALUMINIUM YTTRIUM NOABSTRACT

DERWENT-CLASS: L02 L03 U11

CPI-CODES: L04-C17; L04-C24;

EPI-CODES: U11-E01A;

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L5: Entry 46 of 46

File: DWPI

Mar 19, 1979

DERWENT-ACC-NO: 1979-33968B

DERWENT-WEEK: 197918

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TITLE: High strength ceramics - contg. a titanium-carbon-nitrogen-oxygen system
cpd. and aluminium oxide

PATENT-ASSIGNEE:

ASSIGNEE
MITSUBISHI METAL CORP

CODE

MITV

PRIORITY-DATA:

1977JP-0103145

August 30, 1977

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 54037114 A	March 19, 1979	N/A	000	N/A
JP 86004787 B	February 13, 1986	N/A	000	N/A

INT-CL (IPC): B23B 27/14; C04B 35/58

ABSTRACTED-PUB-NO: JP54037114A

BASIC-ABSTRACT:

The ceramics comprise 1-50 wt. % of $Ti(CuNvOw)_x$ where $(u+v+w)=1$, $0 < u \leq 0.9$, $0 < v \leq 0.9$, $0.1 \leq w \leq 0.8$ and $0.6 \leq x \leq 1.1$, the balance being aluminium oxide and unavoidable contaminants.

In an example, 75 wt. % powdery Al_2O_3 and 25 wt. % $Ti(C_{0.8}N_{0.3}O_{0.4})_{0.945}$ both having an average particle size of 1 μ , were charged in a ceramic ball mill and wet milled in an alcoholic solvent for 24 hrs. The dried mixt. was compressed into a shape which was then sintered by maintaining it at 1800 degrees C in vacuo under a load of 200 kg/cm² for 10 min. to prepare a thermet. Cutting tips were made of the thermet, conventional aluminium ceramics and conventional Al_2O_3 -TiC ceramics and tested for the abrasion of the flank and crater abrasion. The abrasion of the flank is 0.2 mm for the ceramic tip and 0.35 and 0.42 mm for conventional alumina ceramic tip and Al_2O_3 -TiC ceramic tip, respectively. The crater abrasion is 20 μ for the ceramic tip and 20 and 45 μ for the control tips, respectively.

The ceramics show high toughness, abrasion resistance and antioxidants.

TITLE-TERMS: HIGH STRENGTH CERAMIC CONTAIN TITANIUM CARBON NITROGEN OXYGEN
SYSTEM COMPOUND ALUMINIUM OXIDE

DERWENT-CLASS: L02 P54

CPI-CODES: L02-G01;